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MENTAL HEALTH STATUS AND ITS DETERMINANTS AMONG OLDER PEOPLE IN RURAL AREA IN THE DISTRICT OF BANYUMAS CENTRAL JAVA

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ABSTRACT

Elderly people experience several health problems due to their vulnerability to many diseases, which may affect their mental health. This study aims to assess mental health status among older people and its determinants in rural areas. It is a cross-sectional study design and involves 412 respondents from 9 villages in the district of Banyumas. The data was analyzed by using a logistic regression model. The findings showed that older people with a large number of family members were four times more likely to have a mental health issue than those with a small number. Older people with a history of noncommunicable disease (NCD) had a threefold higher risk of experiencing mental health disorders than older people without NCD. Three times as many elderly people with middle economic status reported having mental health issues. Older people with lower education have fewer mental health problems compared to older people who graduated from higher education levels. Health check-up was discovered to influence mental health problems, with older people who did checkups even if irregularly having fewer mental health problems than older people who never did. The study concludes that family size, NCD history, economic condition, education, and health check-up are determinants of mental health disorders in rural Indonesia.

Keywords: *older people, mental health, rural community, Indonesia*

ABSTRAK

Penduduk lansia sering mengalami permasalahan kesehatan dikarenakan kondisi yang rentan terhadap penyakit, hal tersebut berpotensi mempengaruhi terhadap kondisi kesehatan mentalnya. Kajian ini bertujuan untuk mengukur kesehatan mental pada lansia dan faktor-faktor determinan apa saja yang berpengaruh khususnya di daerah pedesaan. Penelitian ini menggunakan desain studi potong lintang dan melibatkan 412 responden dari 9 desa di wilayah Kabupaten Banyumas. Uji regresi logistik digunakan untuk analisis data. Hasil penelitian mengambarkan bahwa lansia dengan jumlah anggota keluarga yang banyak memiliki kemungkinan empat kali lebih besar mengalami masalah kesehatan jiwa dibandingkan lansia yang memiliki jumlah anggota keluarga yang sedikit. Lansia dengan riwayat penyakit tidak menular memiliki tiga kali lebih besar risiko masalah kesehatan mental daripada lansia tanpa penyakit tidak menular. Tiga kali lebih banyak lansia dengan status ekonomi menengah yang mengalami masalah kesehatan mental. Lansia dengan pendidikan yang lebih rendah memiliki lebih sedikit masalah kesehatan mental dibandingkan dengan lansia yang lulus dari tingkat pendidikan yang lebih tinggi. Pemeriksaan kesehatan ditemukan mempengaruhi masalah kesehatan mental, dengan lansia yang melakukan pemeriksaan kesehatan meskipun tidak teratur memiliki lebih sedikit masalah kesehatan mental dibandingkan dengan lansia yang tidak pernah memeriksakan diri. Disimpulkan bahwa ukuran keluarga, riwayat penyakit tidak menular, kondisi ekonomi, pendidikan, dan pemeriksaan kesehatan merupakan faktor penentu masalah kesehatan jiwa di daerah pedesaan di Indonesia.

Kata kunci: lansia, kesehatan mental, masyarakat pedesaan, Indonesia

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Introduction

The development of public health and medical technology has driven population growth and increased life expectancy and longevity. According to World Health Organization (WHO) estimation, the proportion of the world's population aged over 60 years will almost double from 12% to 22% between 2015 and 2050. It is projected that 80% of older people will live in low- and middle-income countries by 2050.[1] There are several health problems are experienced by the elderly due to their vulnerability to many physical and mental disorders and growing risk of disease.[2] Furthermore, aging is associated with other life transitions such as retirement and the loss of a family member, friend, or partner, which may have an impact on their psychological condition. Loneliness, a decrease in sexual activity, and noncommunicable disease (NCD) result in emotional disturbances. These problems can trigger mental health problems in older people.[3,4]

Population aging has become a great concern for the health sector. However, health service provisions for older people are still not a major priority in developing countries, including Indonesia. A significant shift in Indonesian population structure and an increase in life expectancy from 37.5 to 68.6 years have been identified since 1950. It is estimated that the percentage of the population of Indonesia above the age of 65 will be 14.44 percent in 2035.[5] Previous studies about elderly people in Indonesia are available, especially in the context of the socio-cultural aspect of aging and support for older people.[6-8] However, there is limited information regarding mental health status and its determinant factors.

According to WHO data, approximately 15% of adults aged 60 and over experienced mental health problems, and mental and neurological problems account for 6.6% of all disabilities.[9] Mental health issues such as depression and dementia are widely recognized in older people.[10] This can occur because biological changes can interfere with the brain's function and social changes can cause worthlessness, isolation and somatic diseases.[3] Mental health problems can have a high effect on the quality of life (QoL) of older people since they can affect their ability to carry out basic daily living activities, reducing their independence and autonomy. Unfortunately, many of older people are hardly to acknowledge their mental health problems. Many stigmas exist, such as mental health disorders as a sign of disablement and disgraceful.[11,12]

As a result, it is critical to assess older people's mental health status and related factors, particularly in rural areas where information is scarce. By knowing such determinants, efforts can be made to minimize mental health problems among older people. This study aims to assess mental health status among older people and its determinants in rural areas.

Methods

The study was conducted in the district of Banyumas, located in the southwest of Central Java, Indonesia. The district of Banyumas has 27 sub-districts, 39 community health centers and 331 villages. We chose three sub-districts were categorized as rural areas in this regency, which were Lumbir, Purwojati, and Gumelar. By using cluster sampling, nine villages from these three sub-districts are selected as study site, namely: Samudra, Kaliwangi, Cirahab, Gumelar, Klapasawit, Canduk, Karangmangu, Kedungurang, and Lumbir. Rural area categorization based on the Central Bureau of Statistics, Indonesia.[13] This research used a cross-sectional study design. The study population was older people aged 60 years and over in the rural area of Banyumas.

A total of 412 respondents were included in this study. Mental health status was obtained by a structured questionnaire using the 10-item Centre for Epidemiological Studies Depression Scale (CES-D-10) that has been validated in the Indonesian context.[14,15] The CES-D-10 is a 10-item Likert scale questionnaire assessing depressive symptoms in the past week. It consists of five items on somatic symptoms, three items on depressed affect, and two on positive affect. Options for each item range from "rarely or none of the time" (score of 0) to "all of the time" (score of 3). For items 5 and 8, scoring is reversed for positive affect statements. The total score ranges from 0 to 30. Greater symptom severity is indicated by a higher score. The cut off point used in this study is ≥ 13.[16,17]

The characteristics of the older people were measured, including gender, age, education, marital status, occupation, family income, NCD history, older local health post-visit, routine screening history, and ownership of health insurance. Respondents who experienced difficulties in communication were accompanied by household members to help with the interview process. Multivariate analysis using logistic regression was employed to calculate the determinants of health problems among elderly people. The procedure used in this model was the enter method. All the variables were run together to analyze the effect of the determinant factors on the mental health status of older people. Statistical analysis was performed with IBM SPSS Statistics 20 software package.

Ethical clearance was received from the ethical committee of the Faculty of Medicine, Jenderal Soedirman University, Indonesia (Letter No. 2257/UN23.07.5.1/PP/2018). All respondents also declared their agreement to participate voluntarily in the study by signing the informed consent form.

Results

A questionnaire was administered to 416 respondents in three selected sub-districts in Banyumas as the study area. The gender differences found in this research were almost the same as global phenomena, where females were a higher number compared to males because life-

expectancy of females is higher than that of males.[18-20] Here, it was found that 75.49% of respondents were female. More aging (68.93%) was in the age group of 60-74 years old, similar to the national aging figure. Most of them only graduated from elementary school (56,31%) since the research was conducted in rural areas. Most of the respondents are still having partners (60.92%). This pattern is similar to the national figure of aging. The details of respondent's characteristics are shown in Table 1.

Table 1. Characteristics of Respondents

Characteristic	Frequency	Percentage
Gender		
Male	101	24.51
Female	311	75.49
Age		
60-74 years old	284	68,93
≥75 years old	128	31,07
Education		
No Education	161	39.08
Graduated From Elementary School	232	56.31
Graduated From Junior High School	8	1.94
Graduated From Senior High School	7	1.70
Graduated From Collage-Diploma	4	0.97
Marital Status		
Having Partner	251	60.92
No Partner	161	39.08
Working status		
Work	190	46.11
Not working	222	53.89
Economic/monthly income		
Q1	132	32.04
Q2	35	8.50
Q3	85	20.63
Q4	78	18.93
Q5	82	19.90
Having NCD		
Yes	186	45.15
No	226	54.85
Visiting elderly care center		
Visit	205	49.76
No visit	207	50.24
Health check-up		
Yes	11	2.67
No	305	74.03
Never	96	23.30
Having insurance		
Yes	273	66.26
No	139	33.74

This research used 10 questions about psychological conditions asked during the past week to measure mental health problems among older people in a rural area in Indonesia. The questions are: 1) I was bothered by things that usually don't bother me; 2) I had trouble concentrating on what I was doing; 3) I felt depressed; 4) I felt everything I did was an effort; 5) I felt hopeful about the future; 6) I felt fearful; 7) My sleep was restless; 8) I was happy; 9) I felt lonely; 10) I could not get going. Older people's mental health problems are categorized into two categories: 1) good mental health and 2) mental health problems. A respondent can select whether it happened rarely or not in the last week, some days, occasionally, or most of the time. From the results, Table 2 shows

that 14.08% of older people have mental health problems. This number is higher compared to the national figure of mental health problems in the adult community (6.10%). This statistic highlights the importance of mental health issues in the elderly.

Table 2. Mental Health Problem of Older People in Rural Area in Indonesia

Mental health problem	Frequency	Percentage
Good mental health	354	85.92
Have mental health problems	58	14.08

Determinant factors associated with mental health problems among the elderly were analyzed by logistic regression using an enter model. All the variables were run together to analyze the effect on the mental health status of older people. The results of the model are shown in Table 3.

Table 3. The determinants of mental health problems among older people

Determinants	*p*	OR	95% CI for OR	
			Lower	Upper
Gender (male)	0.713	1.150	0.547	2.417
Age (≥ 75 years old)	0.387	1.338	0.692	2.585
Health check-up (never)	0.170			
Regularly	0.785	0.776	0.125	4.811
Irregularly	0.063*	0.487	0.227	1.041
Economic/monthly income				
(Quintile 5 (>IDR1.500.001))	0.126			
Quintile 1 (<IDR100.000)	0.493	1.483	0.481	4.574
Quintile 2 (IDR100.001-350.000)	0.585	1.498	0.351	6.387
Quintile 3 (IDR350.001-800.000)	0.020**	3.567	1.218	10.452
Quintile 4 (IDR800.001-1.500.000)	0.345	1.724	0.557	5.330
Having NCD	0.001***	3.069	1.608	5.858
Working	0.810	1.085	0.559	2.107
Having partner	0.107	0.509	0.224	1.158
Household size (>4 people)	0.008***	4.868	1.520	15.589
Education (university)	0.116			
No formal education	0.068	0.090	0.007	1.198
Elementary school	0.041**	0.070	0.005	0.897
Junior high school	0.490	0.327	0.014	7.813
Senior high school	0.596	0.445	0.022	8.870
Visiting elderly care center	0.414	0.740	0.360	1.524
Current life situation				
(Cohabiting with children or others)	0.561			
Alone	0.920	1.052	0.391	2.832
With spouse only	0.284	1.600	0.677	3.782
Having insurance	0.235	0.679	0.358	1.286

Note: OR = odds ratio; CI = confidence interval.

*p< 0.10, **p< 0.05, ***p< 0.01.

Table 3 was derived from multivariate analysis using logistic regression with the enter method to find determinant factors associated with mental health problems among the elderly in a rural community in Indonesia. The study found that in rural communities, older people with a large number of families had a fourfold greater risk of experiencing mental problems than older people with small families. Older people with a history of NCD have a threefold greater risk of experiencing mental problems than the elderly without NCD. Older people with middle economic status (quintile 3) were three times more vulnerable than the elderly with other economic levels. Older people with lower education have fewer mental health problems compared to older people who graduated from higher education levels. Health check-up was discovered to influence mental health problems, with older people who did checkups even if irregularly having fewer mental health problems than older people who never did. Gender, age, regular checkups, working status, having a partner, visiting an elderly care center, current life situation, and having insurance are all confounding variables in mental health.

Discussion

Older people may experience more common life stressors in their life which affect their mental health. Reduced mobility, chronic pain and other health problems that require long-term care may increase the risk of mental problems such as depression. In this study, we found that older people with extended families had a fourfold greater risk of experiencing mental problems than the elderly in small families. A previous study conducted by Edmund, *et al.* also proved the evidence for the link between family structure and mental health in Asian communitie.[21] This is likely due to more stressors due to household problems with the number of family members. In addition, large family structures require considerable economic support, which sometimes causes more life stressors.[22] In Indonesia, particularly in rural areas, most people live in large family structures, which allows other relatives to live together in one family. This causes the added responsibility of adults, increases the risk of family conflict, and ultimately affects their mental health.[23]

In this study, older people with a history of NCD have twice the risk of experiencing mental problems as the elderly without NCD. Mental health has an effect on physical health and conversely. Increasing age affects the degradation of physical organs and functioning, which commonly increases the risk of health problems. In particular, the elderly had lower cardiovascular–respiratory functions, such as diastolic blood pressure and lung capacity.[24] Therefore, older people are more susceptible to NCDs due to the accumulation of a decrease in the physical quality of their bodies. In this study, the most common NCDs experienced by respondents were hypertension, followed by diabetes, indigestion, and rheumatism. This result is in accordance with previous studies conducted by Jacob, *et al.* and Thakur, *et al.*, found that the most common illnesses in the elderly were coronary heart diseases, diabetes mellitus, cerebrovascular diseases,

and osteoporosis.[25,26] Multiple NCDs in older people are also recognized, where depression, hypertension, and diabetes mellitus are found to be frequently clustered with other illnesses.[27] Therefore, these NCDs can deteriorate their functional and physical status, dignity, and, by turns, influence the mental health of older people.[28,29]

Results of this study also showed that older people who had health check-up in the integrated health post for elderly (*Posyandu lansia*) although they did it irregularly, tended to have fewer mental health problems. The Ministry of Health in Indonesia has promoted this program since the mid-1980s to the elderly. It is a health promotion center managed by the community, which is supervised by community health center. *Posyandu lansia* offers health checkups and other programs for the elderly.[30] By actively participating in social activities, the elderly feel that having friends still feels valuable and can do many positive things. This can cause the elderly to feel happier and have more hope for their lives. Several previous studies also stated that engagement in social activities could enhance the quality of life in older people.[31,32]

Conclusion

This study revealed that factors such as family size, history of NCDs, economic status, health checkups and education affect older people's mental health. Some of those elements are directly tied to health initiatives run by the ministry of health, indicating that the intervention is already in place. Furthermore, it is essential to monitor and increase the participation of the elderly in the *Posyandu lansia*. This program facilitates older people to check their health routinely for minimizing the presence of NCDs. Besides that, meeting with peers during attending *Posyandu lansia* can also avoid stress, boredom in old age, and enhance life satisfaction.

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Conflict of interest

The authors declare no conflict of interest.

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